



#8

SEQUENCE LISTING

<10> MC CARTHY, Sean A
FRASER, Christopher C
SHARP, John D
BARNES, Thomas S
KIRST, Susan J
MYERS, Paul S
WRIGHTON, Nicholas
GOODEARL, Andrew
HOLTZMAN, Douglas A
KHODADOUST, Mehran M

<120> NOVEL GENES ENCODING PROTEINS HAVING PROGNOSTIC, DIAGNOSTIC, PREVENTIVE, THERAPEUTIC, AND OTHER USES

<130> 10147-65

<140> 09/766,511

<141> 2001-01-19

<150> US 09/578,063

<151> 2000-05-24

<150> US 09/333,159

<151> 1999-06-14

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<150> US 09/393,996

<151> 1999-09-10

<150> US 09/345,680

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<160> 85

<170> PatentIn version 3.1

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 35 40 45

Arg Cys Cys Val Arg Ala Leu Ser Ile Gln Arg Leu Trp Tyr Phe Trp
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Phe Leu Leu Met Met Gly Val Leu Phe Cys Cys Gly Ala Gly Phe Phe
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Ile Arg Arg Arg Met Tyr Pro Pro Pro Leu Ile Glu Glu Pro Ala Phe
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Asn Val Ser Tyr Thr Arg Gln Pro Pro Asn Pro Gly Pro Gly Ala Gln
 100 105 110

Gln Pro Gly Pro Pro Tyr Tyr Thr Asp Pro Gly Gly Pro Gly Met Asn
 115 120 125

Pro Val Gly Asn Ser Met Ala Met Ala Phe Gln Val Pro Pro Asn Ser
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Pro Gln Gly Ser Val Ala Cys Pro Pro Pro Pro Ala Tyr Cys Asn Thr
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Val Leu Phe Cys Cys Gly Ala Gly Phe Phe Ile Arg Arg Arg Met Tyr
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Pro Pro Pro Leu Ile Glu Glu Pro Ala Phe Asn Val Ser Tyr Thr Arg
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Gln Pro Pro Asn Pro Gly Pro Gly Ala Gln Gln Pro Gly Pro Pro Tyr
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Tyr Thr Asp Pro Gly Gly Pro Gly Met Asn Pro Val Gly Asn Ser Met
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Ala Met Ala Phe Gln Val Pro Pro Asn Ser Pro Gln Gly Ser Val Ala
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Gln Val Val Lys Ala Lys
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Pro Gly Pro Pro Tyr Tyr Thr Asp Pro Gly Gly Pro Gly Met Asn Pro
35 40 45

Val Gly Asn Ser Met Ala Met Ala Phe Gln Val Pro Pro Asn Ser Pro
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Arg Cys Cys Val Arg Ala Leu Ser Ile Gln Arg Leu Trp Tyr Phe Trp
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Phe Leu Leu Met Met Gly Val Leu Phe Cys Cys Gly Ala Gly Phe Phe
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Ile Arg Arg Arg Met Tyr Pro Pro Pro Leu Ile Glu Glu Pro Thr Phe
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Asn Val Ser Tyr Thr Arg Gln Pro Pro Asn Pro Ala Pro Gly Ala Gln
100 105 110

Gln Met Gly Pro Pro Tyr Tyr Thr Asp Pro Gly Gly Pro Gly Met Asn
115 120 125

Pro Val Gly Asn Thr Met Ala Met Ala Phe Gln Val Gln Pro Asn Ser
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Leu Ser Ile Gln Arg Leu Trp Tyr Phe Trp Phe Leu Leu Met Met Gly
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Val Leu Phe Cys Cys Gly Ala Gly Phe Phe Ile Arg Arg Arg Met Tyr
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Pro Pro Pro Leu Ile Glu Glu Pro Thr Phe Asn Val Ser Tyr Thr Arg
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Gln Pro Pro Asn Pro Ala Pro Gly Ala Gln Gln Met Gly Pro Pro Tyr
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Tyr Thr Asp Pro Gly Gly Pro Gly Met Asn Pro Val Gly Asn Thr Met
100 105 110

Ala Met Ala Phe Gln Val Gln Pro Asn Ser Pro His Gly Gly Thr Thr
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aaacgcttag atcctggaat atttaaggga cttttaaatc ttctgaattt atatttacag	420
tataatcagg tatcttttgt tccgagagga gtatttaatg atctagtttc agttcagtac	480
ttaaactctac aaaggaatcg cctcactgtc cttgggagtg gtacctttgt tggatgggt	540
gctcttcgga tacttgattt atcaaacaat aacattttga ggatatcaga atcaggcttt	600
caacatcttg aaaaccttgc ttgtttgtat ttaggaagta ataatttaac aaaagtacca	660
tcaaattgct ttgaagtact taaaagtctt agaagacttt ctttgtctca taatcctatt	720
gaagcaatac agccctttgc atttaaagga cttgccaatc tggaatacct cctcctgaaa	780
aattcaagaa ttaggaatgt tactagggat gggtttagtg gaattaataa tcttaaacat	840

Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu Leu
 65 70 75 80

Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn Ile
 85 90 95

Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr Phe
 100 105 110

Leu Phe Leu Asn Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile Phe
 115 120 125

Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln Val
 130 135 140

Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln Tyr
 145 150 155 160

Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr Phe
 165 170 175

Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Ile
 180 185 190

Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala Cys
 195 200 205

Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala Phe
 210 215 220

Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro Ile
 225 230 235 240

Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu Tyr
 245 250 255

Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly Phe
 260 265 270

Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp Leu
 275 280 285

Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile Tyr
 290 295 300

Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr Phe
 305 310 315 320
 Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn Asn
 325 330 335
 Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu Ile
 340 345 350
 His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu Leu
 355 360 365
 Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile Tyr
 370 375 380
 Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile Asn
 385 390 395 400
 Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp Ala
 405 410 415
 Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met Met
 420 425 430
 Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr Glu
 435 440 445
 Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala Gly
 450 455 460
 Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr Ala
 465 470 475 480
 Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn Leu
 485 490 495
 Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly Lys
 500 505 510
 Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala Phe
 515 520 525
 Asp Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile Phe

530 535 540
 Leu Ile Tyr Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser Glu
 545 550 555 560
 Asn Ser Arg Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser Ala
 565 570 575
 Arg Tyr Asn Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser Leu
 580 585 590
 Glu Ser Pro Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val Pro
 595 600 605
 Glu Asn Glu Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu
 610 615 620

 <210> 24
 <211> 31
 <212> PRT
 <213> Homo sapiens

 <400> 24
 Met Cys Gly Leu Gln Phe Ser Leu Pro Cys Leu Arg Leu Phe Leu Val
 1 5 10 15
 Val Thr Cys Tyr Leu Leu Leu Leu Leu His Lys Glu Ile Leu Gly
 20 25 30

 <210> 25
 <211> 591
 <212> PRT
 <213> Homo sapiens

 <400> 25
 Cys Ser Ser Val Cys Gln Leu Cys Thr Gly Arg Gln Ile Asn Cys Arg
 1 5 10 15
 Asn Leu Gly Leu Ser Ser Ile Pro Lys Asn Phe Pro Glu Ser Thr Val
 20 25 30
 Phe Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu
 35 40 45
 Leu Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn
 50 55 60

Ile Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr
 65 70 75 80

Phe Leu Phe Leu Asn Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile
 85 90 95

Phe Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln
 100 105 110

Val Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln
 115 120 125

Tyr Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr
 130 135 140

Phe Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Asn
 145 150 155 160

Ile Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala
 165 170 175

Cys Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala
 180 185 190

Phe Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro
 195 200 205

Ile Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu
 210 215 220

Tyr Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly
 225 230 235 240

Phe Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp
 245 250 255

Leu Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile
 260 265 270

Tyr Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr
 275 280 285

Phe Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn

290	295	300
Asn Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu		
305	310	315 320
Ile His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu		
	325	330 335
Leu Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile		
	340	345 350
Tyr Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile		
	355	360 365
Asn Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp		
	370	375 380
Ala Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met		
	385	390 395 400
Met Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr		
	405	410 415
Glu Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala		
	420	425 430
Gly Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr		
	435	440 445
Ala Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn		
	450	455 460
Leu Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly		
	465	470 475 480
Lys Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala		
	485	490 495
Phe Asp Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile		
	500	505 510
Phe Leu Ile Tyr Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser		
	515	520 525

Glu Asn Ser Arg Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser
 530 535 540

Ala Arg Tyr Asn Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser
 545 550 555 560

Leu Glu Ser Pro Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val
 565 570 575

Pro Glu Asn Glu Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu
 580 585 590

<210> 26
 <211> 498
 <212> PRT
 <213> Homo sapiens

<400> 26

Cys Ser Ser Val Cys Gln Leu Cys Thr Gly Arg Gln Ile Asn Cys Arg
 1 5 10 15

Asn Leu Gly Leu Ser Ser Ile Pro Lys Asn Phe Pro Glu Ser Thr Val
 20 25 30

Phe Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu
 35 40 45

Leu Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn
 50 55 60

Ile Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr
 65 70 75 80

Phe Leu Phe Leu Asn Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile
 85 90 95

Phe Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln
 100 105 110

Val Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln
 115 120 125

Tyr Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr
 130 135 140

Phe Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Asn
145 150 155 160

Ile Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala
165 170 175

Cys Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala
180 185 190

Phe Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro
195 200 205

Ile Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu
210 215 220

Tyr Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly
225 230 235 240

Phe Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp
245 250 255

Leu Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile
260 265 270

Tyr Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr
275 280 285

Phe Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn
290 295 300

Asn Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu
305 310 315 320

Ile His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu
325 330 335

Leu Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile
340 345 350

Tyr Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile
355 360 365

Asn Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp
370 375 380

Ala Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met
 385 390 395 400

Met Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr
 405 410 415

Glu Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala
 420 425 430

Gly Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr
 435 440 445

Ala Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn
 450 455 460

Leu Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly
 465 470 475 480

Lys Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala
 485 490 495

Phe Asp

<210> 27
 <211> 18
 <212> PRT
 <213> Homo sapiens

<400> 27

Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile Phe Leu
 1 5 10 15

Ile Tyr

<210> 28
 <211> 75
 <212> PRT
 <213> Homo sapiens

<400> 28

Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser Glu Asn Ser Arg
 1 5 10 15

Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser Ala Arg Tyr Asn
20 25 30

Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser Leu Glu Ser Pro
35 40 45

Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val Pro Glu Asn Glu
50 55 60

Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu
65 70 75

<210> 29
<211> 1529
<212> PRT
<213> Homo sapiens

<400> 29

Met Arg Gly Val Gly Trp Gln Met Leu Ser Leu Ser Leu Gly Leu Val
1 5 10 15

Leu Ala Ile Leu Asn Lys Val Ala Pro Gln Ala Cys Pro Ala Gln Cys
20 25 30

Ser Cys Ser Gly Ser Thr Val Asp Cys His Gly Leu Ala Leu Arg Ser
35 40 45

Val Pro Arg Asn Ile Pro Arg Asn Thr Glu Arg Leu Asp Leu Asn Gly
50 55 60

Asn Asn Ile Thr Arg Ile Thr Lys Thr Asp Phe Ala Gly Leu Arg His
65 70 75 80

Leu Arg Val Leu Gln Leu Met Glu Asn Lys Ile Ser Thr Ile Glu Arg
85 90 95

Gly Ala Phe Gln Asp Leu Lys Glu Leu Glu Arg Leu Arg Leu Asn Arg
100 105 110

Asn His Leu Gln Leu Phe Pro Glu Leu Leu Phe Leu Gly Thr Ala Lys
115 120 125

Leu Tyr Arg Leu Asp Leu Ser Glu Asn Gln Ile Gln Ala Ile Pro Arg
130 135 140

Lys Ala Phe Arg Gly Ala Val Asp Ile Lys Asn Leu Gln Leu Asp Tyr
 145 150 155 160

Asn Gln Ile Ser Cys Ile Glu Asp Gly Ala Phe Arg Ala Leu Arg Asp
 165 170 175

Leu Glu Val Leu Thr Leu Asn Asn Asn Asn Ile Thr Arg Leu Ser Val
 180 185 190

Ala Ser Phe Asn His Met Pro Lys Leu Arg Thr Phe Arg Leu His Ser
 195 200 205

Asn Asn Leu Tyr Cys Asp Cys His Leu Ala Trp Leu Ser Asp Trp Leu
 210 215 220

Arg Gln Arg Pro Arg Val Gly Leu Tyr Thr Gln Cys Met Gly Pro Ser
 225 230 235 240

His Leu Arg Gly His Asn Val Ala Glu Val Gln Lys Arg Glu Phe Val
 245 250 255

Cys Ser Gly His Gln Ser Phe Met Ala Pro Ser Cys Ser Val Leu His
 260 265 270

Cys Pro Ala Ala Cys Thr Cys Ser Asn Asn Ile Val Asp Cys Arg Gly
 275 280 285

Lys Gly Leu Thr Glu Ile Pro Thr Asn Leu Pro Glu Thr Ile Thr Glu
 290 295 300

Ile Arg Leu Glu Gln Asn Thr Ile Lys Val Ile Pro Pro Gly Ala Phe
 305 310 315 320

Ser Pro Tyr Lys Lys Leu Arg Arg Ile Asp Leu Ser Asn Asn Gln Ile
 325 330 335

Ser Glu Leu Ala Pro Asp Ala Phe Gln Gly Leu Arg Ser Leu Asn Ser
 340 345 350

Leu Val Leu Tyr Gly Asn Lys Ile Thr Glu Leu Pro Lys Ser Leu Phe
 355 360 365

Glu Gly Leu Phe Ser Leu Gln Leu Leu Leu Leu Asn Ala Asn Lys Ile
 370 375 380

Asn Cys Leu Arg Val Asp Ala Phe Gln Asp Leu His Asn Leu Asn Leu
 385 390 395 400

Leu Ser Leu Tyr Asp Asn Lys Leu Gln Thr Ile Ala Lys Gly Thr Phe
 405 410 415

Ser Pro Leu Arg Ala Ile Gln Thr Met His Leu Ala Gln Asn Pro Phe
 420 425 430

Ile Cys Asp Cys His Leu Lys Trp Leu Ala Asp Tyr Leu His Thr Asn
 435 440 445

Pro Ile Glu Thr Ser Gly Ala Arg Cys Thr Ser Pro Arg Arg Leu Ala
 450 455 460

Asn Lys Arg Ile Gly Gln Ile Lys Ser Lys Lys Phe Arg Cys Ser Ala
 465 470 475 480

Lys Glu Gln Tyr Phe Ile Pro Gly Thr Glu Asp Tyr Arg Ser Lys Leu
 485 490 495

Ser Gly Asp Cys Phe Ala Asp Leu Ala Cys Pro Glu Lys Cys Arg Cys
 500 505 510

Glu Gly Thr Thr Val Asp Cys Ser Asn Gln Lys Leu Asn Lys Ile Pro
 515 520 525

Glu His Ile Pro Gln Tyr Thr Ala Glu Leu Arg Leu Asn Asn Asn Glu
 530 535 540

Phe Thr Val Leu Glu Ala Thr Gly Ile Phe Lys Lys Leu Pro Gln Leu
 545 550 555 560

Arg Lys Ile Asn Phe Ser Asn Asn Lys Ile Thr Asp Ile Glu Glu Gly
 565 570 575

Ala Phe Glu Gly Ala Ser Gly Val Asn Glu Ile Leu Leu Thr Ser Asn
 580 585 590

Arg Leu Glu Asn Val Gln His Lys Met Phe Lys Gly Leu Glu Ser Leu
 595 600 605

Lys Thr Leu Met Leu Arg Ser Asn Arg Ile Thr Cys Val Gly Asn Asp
 610 615 620

Ser Phe Ile Gly Leu Ser Ser Val Arg Leu Leu Ser Leu Tyr Asp Asn
625 630 635 640

Gln Ile Thr Thr Val Ala Pro Gly Ala Phe Asp Thr Leu His Ser Leu
645 650 655

Ser Thr Leu Asn Leu Leu Ala Asn Pro Phe Asn Cys Asn Cys Tyr Leu
660 665 670

Ala Trp Leu Gly Glu Trp Leu Arg Lys Lys Arg Ile Val Thr Gly Asn
675 680 685

Pro Arg Cys Gln Lys Pro Tyr Phe Leu Lys Glu Ile Pro Ile Gln Asp
690 695 700

Val Ala Ile Gln Asp Phe Thr Cys Asp Asp Gly Asn Asp Asp Asn Ser
705 710 715 720

Cys Ser Pro Leu Ser Arg Cys Pro Thr Glu Cys Thr Cys Leu Asp Thr
725 730 735

Val Val Arg Cys Ser Asn Lys Gly Leu Lys Val Leu Pro Lys Gly Ile
740 745 750

Pro Arg Asp Val Thr Glu Leu Tyr Leu Asp Gly Asn Gln Phe Thr Leu
755 760 765

Val Pro Lys Glu Leu Ser Asn Tyr Lys His Leu Thr Leu Ile Asp Leu
770 775 780

Ser Asn Asn Arg Ile Ser Thr Leu Ser Asn Gln Ser Phe Ser Asn Met
785 790 795 800

Thr Gln Leu Leu Thr Leu Ile Leu Ser Tyr Asn Arg Leu Arg Cys Ile
805 810 815

Pro Pro Arg Thr Phe Asp Gly Leu Lys Ser Leu Arg Leu Leu Ser Leu
820 825 830

His Gly Asn Asp Ile Ser Val Val Pro Glu Gly Ala Phe Asn Asp Leu
835 840 845

Ser Ala Leu Ser His Leu Ala Ile Gly Ala Asn Pro Leu Tyr Cys Asp

850		855		860
Cys Asn Met Gln Trp Leu Ser Asp Trp Val Lys Ser Glu Tyr Lys Glu				
865		870		880
Pro Gly Ile Ala Arg Cys Ala Gly Pro Gly Glu Met Ala Asp Lys Leu				
	885		890	895
Leu Leu Thr Thr Pro Ser Lys Lys Phe Thr Cys Gln Gly Pro Val Asp				
	900		905	910
Val Asn Ile Leu Ala Lys Cys Asn Pro Cys Leu Ser Asn Pro Cys Lys				
	915		920	925
Asn Asp Gly Thr Cys Asn Ser Asp Pro Val Asp Phe Tyr Arg Cys Thr				
	930		935	940
Cys Pro Tyr Gly Phe Lys Gly Gln Asp Cys Asp Val Pro Ile His Ala				
945		950		960
Cys Ile Ser Asn Pro Cys Lys His Gly Gly Thr Cys His Leu Lys Glu				
	965		970	975
Gly Glu Glu Asp Gly Phe Trp Cys Ile Cys Ala Asp Gly Phe Glu Gly				
	980		985	990
Glu Asn Cys Glu Val Asn Val Asp Asp Cys Glu Asp Asn Asp Cys Glu				
	995		1000	1005
Asn Asn Ser Thr Cys Val Asp Gly Ile Asn Asn Tyr Thr Cys Leu				
	1010		1015	1020
Cys Pro Pro Glu Tyr Thr Gly Glu Leu Cys Glu Glu Lys Leu Asp				
	1025		1030	1035
Phe Cys Ala Gln Asp Leu Asn Pro Cys Gln His Asp Ser Lys Cys				
	1040		1045	1050
Ile Leu Thr Pro Lys Gly Phe Lys Cys Asp Cys Thr Pro Gly Tyr				
	1055		1060	1065
Val Gly Glu His Cys Asp Ile Asp Phe Asp Asp Cys Gln Asp Asn				
	1070		1075	1080

Lys	Cys	Lys	Asn	Gly	Ala	His	Cys	Thr	Asp	Ala	Val	Asn	Gly	Tyr
1085						1090					1095			
Thr	Cys	Ile	Cys	Pro	Glu	Gly	Tyr	Ser	Gly	Leu	Phe	Cys	Glu	Phe
1100						1105					1110			
Ser	Pro	Pro	Met	Val	Leu	Pro	Arg	Thr	Ser	Pro	Cys	Asp	Asn	Phe
1115						1120					1125			
Asp	Cys	Gln	Asn	Gly	Ala	Gln	Cys	Ile	Val	Arg	Ile	Asn	Glu	Pro
1130						1135					1140			
Ile	Cys	Gln	Cys	Leu	Pro	Gly	Tyr	Gln	Gly	Glu	Lys	Cys	Glu	Lys
1145						1150					1155			
Leu	Val	Ser	Val	Asn	Phe	Ile	Asn	Lys	Glu	Ser	Tyr	Leu	Gln	Ile
1160						1165					1170			
Pro	Ser	Ala	Lys	Val	Arg	Pro	Gln	Thr	Asn	Ile	Thr	Leu	Gln	Ile
1175						1180					1185			
Ala	Thr	Asp	Glu	Asp	Ser	Gly	Ile	Leu	Leu	Tyr	Lys	Gly	Asp	Lys
1190						1195					1200			
Asp	His	Ile	Ala	Val	Glu	Leu	Tyr	Arg	Gly	Arg	Val	Arg	Ala	Ser
1205						1210					1215			
Tyr	Asp	Thr	Gly	Ser	His	Pro	Ala	Ser	Ala	Ile	Tyr	Ser	Val	Glu
1220						1225					1230			
Thr	Ile	Asn	Asp	Gly	Asn	Phe	His	Ile	Val	Glu	Leu	Leu	Ala	Leu
1235						1240					1245			
Asp	Gln	Ser	Leu	Ser	Leu	Ser	Val	Asp	Gly	Gly	Asn	Pro	Lys	Ile
1250						1255					1260			
Ile	Thr	Asn	Leu	Ser	Lys	Gln	Ser	Thr	Leu	Asn	Phe	Asp	Ser	Pro
1265						1270					1275			
Leu	Tyr	Val	Gly	Gly	Met	Pro	Gly	Lys	Ser	Asn	Val	Ala	Ser	Leu
1280						1285					1290			
Arg	Gln	Ala	Pro	Gly	Gln	Asn	Gly	Thr	Ser	Phe	His	Gly	Cys	Ile
1295						1300					1305			

Arg	Asn	Leu	Tyr	Ile	Asn	Ser	Glu	Leu	Gln	Asp	Phe	Gln	Lys	Val
1310						1315					1320			
Pro	Met	Gln	Thr	Gly	Ile	Leu	Pro	Gly	Cys	Glu	Pro	Cys	His	Lys
1325						1330					1335			
Lys	Val	Cys	Ala	His	Gly	Thr	Cys	Gln	Pro	Ser	Ser	Gln	Ala	Gly
1340						1345					1350			
Phe	Thr	Cys	Glu	Cys	Gln	Glu	Gly	Trp	Met	Gly	Pro	Leu	Cys	Asp
1355						1360					1365			
Gln	Arg	Thr	Asn	Asp	Pro	Cys	Leu	Gly	Asn	Lys	Cys	Val	His	Gly
1370						1375					1380			
Thr	Cys	Leu	Pro	Ile	Asn	Ala	Phe	Ser	Tyr	Ser	Cys	Lys	Cys	Leu
1385						1390					1395			
Glu	Gly	His	Gly	Gly	Val	Leu	Cys	Asp	Glu	Glu	Glu	Asp	Leu	Phe
1400						1405					1410			
Asn	Pro	Cys	Gln	Ala	Ile	Lys	Cys	Lys	His	Gly	Lys	Cys	Arg	Leu
1415						1420					1425			
Ser	Gly	Leu	Gly	Gln	Pro	Tyr	Cys	Glu	Cys	Ser	Ser	Gly	Tyr	Thr
1430						1435					1440			
Gly	Asp	Ser	Cys	Asp	Arg	Glu	Ile	Ser	Cys	Arg	Gly	Glu	Arg	Ile
1445						1450					1455			
Arg	Asp	Tyr	Tyr	Gln	Lys	Gln	Gln	Gly	Tyr	Ala	Ala	Cys	Gln	Thr
1460						1465					1470			
Thr	Lys	Lys	Val	Ser	Arg	Leu	Glu	Cys	Arg	Gly	Gly	Cys	Ala	Gly
1475						1480					1485			
Gly	Gln	Cys	Cys	Gly	Pro	Leu	Arg	Ser	Lys	Arg	Arg	Lys	Tyr	Ser
1490						1495					1500			
Phe	Glu	Cys	Thr	Asp	Gly	Ser	Ser	Phe	Val	Asp	Glu	Val	Glu	Lys
1505						1510					1515			
Val	Val	Lys	Cys	Gly	Cys	Thr	Arg	Cys	Val	Ser				
1520						1525								

<210> 30
 <211> 4900
 <212> DNA
 <213> Homo sapiens

<400> 30
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 ccatattatt ttgtgcacat tttccctggc actctggggtt gctagccccg ccgggcactg 120
 ggccctcagac actgcgcgggt tccctcggag cagcaagcta aagaaagccc ccagtgccgg 180
 cgaggaagga ggcggcgggg aaagatgcgc ggcgttggct ggcagatgct gtccctgtcg 240
 ctgggggttag tgctggcgat cctgaacaag gtggcaccgc aggcgtgccc ggcgcagtgc 300
 tcttgctcgg gcagcacagt ggactgtcac gggctggcgc tgcgcagcgt gccaggaat 360
 atcccccgca acaccgagag actggattta aatggaaata acatcacaag aattacgaag 420
 acagattttg ctgggtcttag acatctaaga gttcttcagc ttatggagaa taagattagc 480
 accattgaaa gaggagcatt ccaggatctt aaagaactag agagactgcg tttaaacaga 540
 aatcaccttc agctgtttcc tgagttgctg tttcttggga ctgcgaagct atacaggctt 600
 gatctcagtg aaaaccaaatt tcaggcaatc ccaaggaaag ctttccgtgg ggcagttgac 660
 ataaaaaatt tgcaactgga ttacaaccag atcagctgta ttgaagatgg ggcattcagg 720
 gctctccggg acctggaagt gctcactctc aacaataaca acattactag actttctgtg 780
 gcaagtttca accatatgcc taaacttagg acttttcgac tgcattcaaa caacctgtat 840
 tgtgactgcc acctggcctg gctctccgac tggcttcgcc aaaggcctcg ggttggtctg 900
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<400> 31
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3510

<210> 32

<211> 1530

<212> DNA

<213> Homo sapiens

<400> 32

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<210> 33
<211> 510
<212> PRT
<213> Homo sapiens

<400> 33

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Glu Leu Glu Thr Ser Asp Val Val Thr Val Val Leu Gly Gln Asp Ala
35 40 45

Lys Leu Pro Cys Phe Tyr Arg Gly Asp Ser Gly Glu Gln Val Gly Gln
50 55 60

Val Ala Trp Ala Arg Val Asp Ala Gly Glu Gly Ala Gln Glu Leu Ala
65 70 75 80

Leu Leu His Ser Lys Tyr Gly Leu His Val Ser Pro Ala Tyr Glu Gly
85 90 95

Arg Val Glu Gln Pro Pro Pro Pro Arg Asn Pro Leu Asp Gly Ser Val
100 105 110

Leu Leu Arg Asn Ala Val Gln Ala Asp Glu Gly Glu Tyr Glu Cys Arg
115 120 125

Val Ser Thr Phe Pro Ala Gly Ser Phe Gln Ala Arg Leu Arg Leu Arg
130 135 140

Val Leu Val Pro Pro Leu Pro Ser Leu Asn Pro Gly Pro Ala Leu Glu
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Glu Gly Gln Gly Leu Thr Leu Ala Ala Ser Cys Thr Ala Glu Gly Ser
165 170 175

Pro Ala Pro Ser Val Thr Trp Asp Thr Glu Val Lys Gly Thr Thr Ser
180 185 190

Ser Arg Ser Phe Lys His Ser Arg Ser Ala Ala Val Thr Ser Glu Phe

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His Leu Val Pro Ser Arg Ser Met Asn Gly Gln Pro Leu Thr Cys Val		
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His Val Ser Phe Leu Ala Glu Ala Ser Val Arg Gly Leu Glu Asp Gln		
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Asn Leu Trp His Ile Gly Arg Glu Gly Ala Met Leu Lys Cys Leu Ser		
	260	265 270
Glu Gly Gln Pro Pro Pro Ser Tyr Asn Trp Thr Arg Leu Asp Gly Pro		
	275	280 285
Leu Pro Ser Gly Val Arg Val Asp Gly Asp Thr Leu Gly Phe Pro Pro		
	290	295 300
Leu Thr Thr Glu His Ser Gly Ile Tyr Val Cys His Val Ser Asn Glu		
305	310	315 320
Phe Ser Ser Arg Asp Ser Gln Val Thr Val Asp Val Leu Asp Pro Gln		
	325	330 335
Glu Asp Ser Gly Lys Gln Val Asp Leu Val Ser Ala Ser Val Val Val		
	340	345 350
Val Gly Val Ile Ala Ala Leu Leu Phe Cys Leu Leu Val Val Val Val		
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Val Leu Met Ser Arg Tyr His Arg Arg Lys Ala Gln Gln Met Thr Gln		
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Lys Tyr Glu Glu Glu Leu Thr Leu Thr Arg Glu Asn Ser Ile Arg Arg		
385	390	395 400
Leu His Ser His His Thr Asp Pro Arg Ser Gln Pro Glu Glu Ser Val		
	405	410 415
Gly Leu Arg Ala Glu Gly His Pro Asp Ser Leu Lys Asp Asn Ser Ser		
	420	425 430

Cys Ser Val Met Ser Glu Glu Pro Glu Gly Arg Ser Tyr Ser Thr Leu
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Thr Thr Val Arg Glu Ile Glu Thr Gln Thr Glu Leu Leu Ser Pro Gly
 450 455 460

Ser Gly Arg Ala Glu Glu Glu Glu Asp Gln Asp Glu Gly Ile Lys Gln
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Ala Met Asn His Phe Val Gln Glu Asn Gly Thr Leu Arg Ala Lys Pro
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Thr Gly Asn Gly Ile Tyr Ile Asn Gly Arg Gly His Leu Val
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<210> 34
 <211> 31
 <212> PRT
 <213> Homo sapiens

<400> 34

Met Pro Leu Ser Leu Gly Ala Glu Met Trp Gly Pro Glu Ala Trp Leu
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Leu Leu Leu Leu Leu Leu Ala Ser Phe Thr Gly Arg Cys Pro Ala
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<210> 35
 <211> 479
 <212> PRT
 <213> Homo sapiens

<400> 35

Gly Glu Leu Glu Thr Ser Asp Val Val Thr Val Val Leu Gly Gln Asp
 1 5 10 15

Ala Lys Leu Pro Cys Phe Tyr Arg Gly Asp Ser Gly Glu Gln Val Gly
 20 25 30

Gln Val Ala Trp Ala Arg Val Asp Ala Gly Glu Gly Ala Gln Glu Leu
 35 40 45

Ala Leu Leu His Ser Lys Tyr Gly Leu His Val Ser Pro Ala Tyr Glu
 50 55 60

Gly Arg Val Glu Gln Pro Pro Pro Pro Arg Asn Pro Leu Asp Gly Ser

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Arg	Val	Leu	Val	Pro	Pro	Leu	Pro	Ser	Leu	Asn	Pro	Gly	Pro	Ala	Leu
		115					120					125			
Glu	Glu	Gly	Gln	Gly	Leu	Thr	Leu	Ala	Ala	Ser	Cys	Thr	Ala	Glu	Gly
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Ser	Pro	Ala	Pro	Ser	Val	Thr	Trp	Asp	Thr	Glu	Val	Lys	Gly	Thr	Thr
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Ser	Ser	Arg	Ser	Phe	Lys	His	Ser	Arg	Ser	Ala	Ala	Val	Thr	Ser	Glu
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Phe	His	Leu	Val	Pro	Ser	Arg	Ser	Met	Asn	Gly	Gln	Pro	Leu	Thr	Cys
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Pro	Leu	Pro	Ser	Gly	Val	Arg	Val	Asp	Gly	Asp	Thr	Leu	Gly	Phe	Pro
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Glu	Phe	Ser	Ser	Arg	Asp	Ser	Gln	Val	Thr	Val	Asp	Val	Leu	Asp	Pro
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Gln Glu Asp Ser Gly Lys Gln Val Asp Leu Val Ser Ala Ser Val Val
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Val Val Gly Val Ile Ala Ala Leu Leu Phe Cys Leu Leu Val Val Val
 325 330 335

Val Val Leu Met Ser Arg Tyr His Arg Arg Lys Ala Gln Gln Met Thr
 340 345 350

Gln Lys Tyr Glu Glu Glu Leu Thr Leu Thr Arg Glu Asn Ser Ile Arg
 355 360 365

Arg Leu His Ser His His Thr Asp Pro Arg Ser Gln Pro Glu Glu Ser
 370 375 380

Val Gly Leu Arg Ala Glu Gly His Pro Asp Ser Leu Lys Asp Asn Ser
 385 390 395 400

Ser Cys Ser Val Met Ser Glu Glu Pro Glu Gly Arg Ser Tyr Ser Thr
 405 410 415

Leu Thr Thr Val Arg Glu Ile Glu Thr Gln Thr Glu Leu Leu Ser Pro
 420 425 430

Gly Ser Gly Arg Ala Glu Glu Glu Glu Asp Gln Asp Glu Gly Ile Lys
 435 440 445

Gln Ala Met Asn His Phe Val Gln Glu Asn Gly Thr Leu Arg Ala Lys
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Pro Thr Gly Asn Gly Ile Tyr Ile Asn Gly Arg Gly His Leu Val
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<210> 36
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 36

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Ala Lys Leu Pro Cys Phe Tyr Arg Gly Asp Ser Gly Glu Gln Val Gly
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Gln Val Ala Trp Ala Arg Val Asp Ala Gly Glu Gly Ala Gln Glu Leu
 35 40 45

Ala Leu Leu His Ser Lys Tyr Gly Leu His Val Ser Pro Ala Tyr Glu
 50 55 60

Gly Arg Val Glu Gln Pro Pro Pro Pro Arg Asn Pro Leu Asp Gly Ser
 65 70 75 80

Val Leu Leu Arg Asn Ala Val Gln Ala Asp Glu Gly Glu Tyr Glu Cys
 85 90 95

Arg Val Ser Thr Phe Pro Ala Gly Ser Phe Gln Ala Arg Leu Arg Leu
 100 105 110

Arg Val Leu Val Pro Pro Leu Pro Ser Leu Asn Pro Gly Pro Ala Leu
 115 120 125

Glu Glu Gly Gln Gly Leu Thr Leu Ala Ala Ser Cys Thr Ala Glu Gly
 130 135 140

Ser Pro Ala Pro Ser Val Thr Trp Asp Thr Glu Val Lys Gly Thr Thr
 145 150 155 160

Ser Ser Arg Ser Phe Lys His Ser Arg Ser Ala Ala Val Thr Ser Glu
 165 170 175

Phe His Leu Val Pro Ser Arg Ser Met Asn Gly Gln Pro Leu Thr Cys
 180 185 190

Val Val Ser His Pro Gly Leu Leu Gln Asp Gln Arg Ile Thr His Ile
 195 200 205

Leu His Val Ser Phe Leu Ala Glu Ala Ser Val Arg Gly Leu Glu Asp
 210 215 220

Gln Asn Leu Trp His Ile Gly Arg Glu Gly Ala Met Leu Lys Cys Leu
 225 230 235 240

Ser Glu Gly Gln Pro Pro Pro Ser Tyr Asn Trp Thr Arg Leu Asp Gly
 245 250 255

Pro Leu Pro Ser Gly Val Arg Val Asp Gly Asp Thr Leu Gly Phe Pro
 260 265 270

Pro Leu Thr Thr Glu His Ser Gly Ile Tyr Val Cys His Val Ser Asn
 275 280 285

Glu Phe Ser Ser Arg Asp Ser Gln Val Thr Val Asp Val Leu Asp Pro
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Gln Glu Asp Ser Gly Lys Gln Val Asp Leu
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<210> 37
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 37

Val Ser Ala Ser Val Val Val Val Gly Val Ile Ala Ala Leu Leu Phe
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Cys Leu Leu Val Val Val Val Val Leu
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<210> 38
 <211> 140
 <212> PRT
 <213> Homo sapiens

<400> 38

Met Ser Arg Tyr His Arg Arg Lys Ala Gln Gln Met Thr Gln Lys Tyr
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 20 25 30

Ser His His Thr Asp Pro Arg Ser Gln Pro Glu Glu Ser Val Gly Leu
 35 40 45

Arg Ala Glu Gly His Pro Asp Ser Leu Lys Asp Asn Ser Ser Cys Ser
 50 55 60

Val Met Ser Glu Glu Pro Glu Gly Arg Ser Tyr Ser Thr Leu Thr Thr
 65 70 75 80

Val Arg Glu Ile Glu Thr Gln Thr Glu Leu Leu Ser Pro Gly Ser Gly
 85 90 95

Arg Ala Glu Glu Glu Glu Asp Gln Asp Glu Gly Ile Lys Gln Ala Met
100 105 110

Asn His Phe Val Gln Glu Asn Gly Thr Leu Arg Ala Lys Pro Thr Gly
115 120 125

Asn Gly Ile Tyr Ile Asn Gly Arg Gly His Leu Val
130 135 140

<210> 39
<211> 0
<212> DNA
<213> Homo sapiens

<400> 39
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3

<210> 40
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<213> Homo sapiens

<400> 40
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3

<210> 41
<211> 2510
<212> DNA
<213> Homo sapiens

<400> 41

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tgatattctg tttttaata aacagacaaa acttgaaaaa aaaaaaaaaa 2510

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 <211> 897
 <212> DNA
 <213> Homo sapiens

<400> 42
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<210> 43
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 43

Lys Gly Thr Thr Ser Ser Arg Ser Phe Lys His Ser Arg Ser Ala Ala
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Val Thr Ser Glu Phe His Leu Val Pro Ser Arg Ser Met Asn Gly Gln
 20 25 30

Pro Leu Thr Cys Val Val Ser His Pro Gly Leu Leu Gln Asp Gln Arg
 35 40 45

Ile Thr His Ile Leu His Val Ser Phe Leu Ala Glu Ala Ser Val Arg
 50 55 60

Gly Leu Glu Asp Gln Asn Leu Trp His Ile Gly Arg Glu Gly Ala Met
 65 70 75 80

Leu Lys Cys Leu Ser Glu Gly Gln Pro Pro Pro Ser Tyr Asn Trp Thr
 85 90 95

Arg Leu Asp Gly Pro Leu Pro Ser Gly Val Arg Val Asp Gly Asp Thr
 100 105 110

Leu Gly Phe Pro Pro Leu Thr Thr Glu His Ser Gly Ile Tyr Val Cys
 115 120 125

His Val Ser Asn Glu Phe Ser Ser Arg Asp Ser Gln Val Thr Val Asp
 130 135 140

Val Leu Ala Asp Pro Gln Glu Asp Ser Gly Lys Gln Val Asp Leu Val
 145 150 155 160

Ser Ala Ser Val Val Val Val Gly Val Ile Ala Ala Leu Leu Phe Cys
 165 170 175

Leu Leu Val Val Val Val Val Leu Met Ser Arg Tyr His Arg Arg Lys
 180 185 190

Ala Gln Gln Met Thr Gln Lys Tyr Glu Glu Glu Leu Thr Leu Thr Arg
 195 200 205

Glu Asn Ser Ile Arg Arg Leu His Ser His His Thr Asp Pro Arg Ser
 210 215 220

Gln Ser Glu Glu Pro Glu Gly Arg Ser Tyr Ser Thr Leu Thr Thr Val
 225 230 235 240

Arg Glu Ile Glu Thr Gln Thr Glu Leu Leu Ser Pro Gly Ser Gly Arg
 245 250 255

Ala Glu Glu Glu Glu Asp Gln Asp Glu Gly Ile Lys Gln Ala Met Asn
 260 265 270

His Phe Val Gln Glu Asn Gly Thr Leu Arg Ala Lys Pro Thr Gly Asn
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Gly Ile Tyr Ile Asn Gly Arg Gly His Leu Val
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<400> 44
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<210> 45
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<400> 49
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<210> 50
 <211> 0
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<400> 50
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<210> 51
 <211> 3114
 <212> DNA
 <213> Homo sapiens

<400> 51

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 <211> 627
 <212> DNA
 <213> Homo sapiens

<400> 52
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 atatgtgaga tgaataagat ttaccta 627

<210> 53
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 53

Met Met Gln Glu Gln Gln Pro Gln Ser Thr Glu Lys Arg Gly Trp Leu
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Ser Leu Arg Leu Trp Ser Val Ala Gly Ile Ser Ile Ala Leu Leu Ser
 20 25 30

Ala Cys Phe Ile Val Ser Cys Val Val Thr Tyr His Phe Thr Tyr Gly
 35 40 45

Glu Thr Gly Lys Arg Leu Ser Glu Leu His Ser Tyr His Ser Ser Leu
 50 55 60

Thr Cys Phe Ser Glu Gly Thr Lys Val Pro Ala Trp Gly Cys Cys Pro
 65 70 75 80

Ala Ser Trp Lys Ser Phe Gly Ser Ser Cys Tyr Phe Ile Ser Ser Glu

<400> 55

Glu Thr Gly Lys Arg Leu Ser Glu Leu His Ser Tyr His Ser Ser Leu
1 5 10 15

Thr Cys Phe Ser Glu Gly Thr Lys Val Pro Ala Trp Gly Cys Cys Pro
20 25 30

Ala Ser Trp Lys Ser Phe Gly Ser Ser Cys Tyr Phe Ile Ser Ser Glu
35 40 45

Glu Lys Val Trp Ser Lys Ser Glu Gln Asn Cys Val Glu Met Gly Ala
50 55 60

His Leu Val Val Phe Asn Thr Glu Ala Glu Gln Asn Phe Ile Val Gln
65 70 75 80

Gln Leu Asn Glu Ser Phe Ser Tyr Phe Leu Gly Leu Ser Asp Pro Gln
85 90 95

Gly Asn Asn Asn Trp Gln Trp Ile Asp Lys Thr Pro Tyr Glu Lys Asn
100 105 110

Val Arg Phe Trp His Leu Gly Glu Pro Asn His Ser Ala Glu Gln Cys
115 120 125

Ala Ser Ile Val Phe Trp Lys Pro Thr Gly Trp Gly Trp Asn Asp Val
130 135 140

Ile Cys Glu Thr Arg Arg Asn Ser Ile Cys Glu Met Asn Lys Ile Tyr
145 150 155 160

Leu

<210> 56

<211> 0

<212> DNA

<213> Homo sapiens

<400> 56

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3

<210> 57

<211> 0

<212> DNA

<213> Homo sapiens

<400> 57
000 3

<210> 58
<211> 0
<212> DNA
<213> Homo sapiens

<400> 58
000 3

<210> 59
<211> 0
<212> DNA
<213> Homo sapiens

<400> 59
000 3

<210> 60
<211> 209
<212> PRT
<213> Mus sp.

<400> 60

Met Val Gln Glu Arg Gln Ser Gln Gly Lys Gly Val Cys Trp Thr Leu
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Arg Leu Trp Ser Ala Ala Val Ile Ser Met Leu Leu Leu Ser Thr Cys
20 25 30

Phe Ile Ala Ser Cys Val Val Thr Tyr Gln Phe Ile Met Asp Gln Pro
35 40 45

Ser Arg Arg Leu Tyr Glu Leu His Thr Tyr His Ser Ser Leu Thr Cys
50 55 60

Phe Ser Glu Gly Thr Met Val Ser Glu Lys Met Trp Gly Cys Cys Pro
65 70 75 80

Asn His Trp Lys Ser Phe Gly Ser Ser Cys Tyr Leu Ile Ser Thr Lys
85 90 95

Glu Asn Phe Trp Ser Thr Ser Glu Gln Asn Cys Val Gln Met Gly Ala
100 105 110

His Leu Val Val Ile Asn Thr Glu Ala Glu Gln Asn Phe Ile Thr Gln

115	120	125
Gln Leu Asn Glu Ser Leu Ser Tyr Phe Leu Gly Leu Ser Asp Pro Gln		
130	135	140
Gly Asn Gly Lys Trp Gln Trp Ile Asp Asp Thr Pro Phe Ser Gln Asn		
145	150	155
Val Arg Phe Trp His Pro His Glu Pro Asn Leu Pro Glu Glu Arg Cys		
165	170	175
Val Ser Ile Val Tyr Trp Asn Pro Ser Lys Trp Gly Trp Asn Asp Val		
180	185	190
Phe Cys Asp Ser Lys His Asn Ser Ile Cys Glu Met Lys Lys Ile Tyr		
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Leu

<210> 61
 <211> 821
 <212> DNA
 <213> Mus sp.

<220>
 <221> misc_feature
 <222> (788)..(788)
 <223> unsure

<400> 61	
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ttattatgga ccagcccagt agaagactat atgaacttca cacataccat tccagtctca	360
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 tccttcgaaa tggggctggg aatgatgttt tctgtgatag taaacacaat tcaatatgtg 780
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<210> 62
 <211> 534
 <212> DNA
 <213> Mus sp.

<400> 62
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 tcggatccca aggtaatggc aaatggcaat ggatcgatga tactcctttc agtcaaaatg 480
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<210> 63
 <211> 178
 <212> PRT
 <213> Mus sp.

<400> 63

Met Val Gln Glu Arg Gln Ser Gln Gly Lys Gly Val Cys Trp Thr Leu
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Arg Leu Trp Ser Ala Ala Val Ile Ser Met Leu Leu Leu Ser Thr Cys
 20 25 30

Phe Ile Ala Ser Cys Val Val Thr Tyr Gln Phe Ile Met Asp Gln Pro
 35 40 45

Ser Arg Arg Leu Tyr Glu Leu His Thr Tyr His Ser Ser Leu Thr Cys
 50 55 60

Phe Ser Glu Gly Thr Met Val Ser Glu Lys Met Trp Gly Cys Cys Pro
 65 70 75 80

Asn His Trp Lys Ser Phe Gly Ser Ser Cys Tyr Leu Ile Ser Thr Lys
85 90 95

Glu Asn Phe Trp Ser Thr Ser Glu Gln Asn Cys Val Gln Met Gly Ala
100 105 110

His Leu Val Val Ile Asn Thr Glu Ala Glu Gln Asn Phe Ile Thr Gln
115 120 125

Gln Leu Asn Glu Ser Leu Ser Tyr Phe Leu Gly Leu Ser Asp Pro Lys
130 135 140

Val Met Ala Asn Gly Asn Gly Ser Met Ile Leu Leu Ser Val Lys Met
145 150 155 160

Ser Gly Ser Gly Thr Pro Met Asn Pro Ile Phe Gln Lys Ser Gly Val
165 170 175

Phe Gln

<210> 64
<211> 48
<212> PRT
<213> Mus sp.

<400> 64

Met Val Gln Glu Arg Gln Ser Gln Gly Lys Gly Val Cys Trp Thr Leu
1 5 10 15

Arg Leu Trp Ser Ala Ala Val Ile Ser Met Leu Leu Leu Ser Thr Cys
20 25 30

Phe Ile Ala Ser Cys Val Val Thr Tyr Gln Phe Ile Met Asp Gln Pro
35 40 45

<210> 65
<211> 130
<212> PRT
<213> Mus sp.

<400> 65

Ser Arg Arg Leu Tyr Glu Leu His Thr Tyr His Ser Ser Leu Thr Cys
1 5 10 15

Phe Ser Glu Gly Thr Met Val Ser Glu Lys Met Trp Gly Cys Cys Pro
 20 25 30

Asn His Trp Lys Ser Phe Gly Ser Ser Cys Tyr Leu Ile Ser Thr Lys
 35 40 45

Glu Asn Phe Trp Ser Thr Ser Glu Gln Asn Cys Val Gln Met Gly Ala
 50 55 60

His Leu Val Val Ile Asn Thr Glu Ala Glu Gln Asn Phe Ile Thr Gln
 65 70 75 80

Gln Leu Asn Glu Ser Leu Ser Tyr Phe Leu Gly Leu Ser Asp Pro Lys
 85 90 95

Val Met Ala Asn Gly Asn Gly Ser Met Ile Leu Leu Ser Val Lys Met
 100 105 110

Ser Gly Ser Gly Thr Pro Met Asn Pro Ile Phe Gln Lys Ser Gly Val
 115 120 125

Phe Gln
 130

<210> 66
 <211> 0
 <212> DNA
 <213> Mus sp.

<400> 66
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3

<210> 67
 <211> 0
 <212> DNA
 <213> Mus sp.

<400> 67
 000

3

<210> 68
 <211> 0
 <212> DNA
 <213> Mus sp.

<400> 68
 000

3

<210> 69
 <211> 0
 <212> DNA
 <213> Mus sp.

<400> 69
 000

3

<210> 70
 <211> 0
 <212> DNA
 <213> Mus sp.

<400> 70
 000

3

<210> 71
 <211> 1252
 <212> DNA
 <213> Mus sp.

<400> 71

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gtcgtatttt ggagacagat gcaagaaacc cctgaccttc tgaacataca cctcaacaat	180
ggtgcaggaa agacaatccc aagggaagg agtctgctgg accctgagac tctggtcagc	240
tgctgtgatt tccatgttac tcttgagtac ctgtttcatt gcgagctgtg tggtgactta	300
ccaattttatt atggaccagc ccagtagaag actatatgaa cttcacacat accattccag	360
tctcacctgc ttcagtgaag ggactatggg gtcagaaaaa atgtggggat gctgccccaa	420
tcactggaag tcatttggct ccagctgcta cctcatttct accaaggaga acttctggag	480
caccagtgaag cagaactgtg ttcagatggg ggctcatctg gtggtgatca atactgaagc	540
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ctgtcagctt gaccagtcag catgtctggg ggcattttct tgattaatga ttgttgtaag 1080
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 catccatctc tgccctcagg tttctgcccc aggggtcttgc cctgggtttct ttctatgaac 1200
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<210> 72
 <211> 627
 <212> DNA
 <213> Mus sp.

<400> 72
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 taccaattta ttatggacca gcccagtaga agactatatg aacttcacac ataccattcc 180
 agtctcacct gcttcagtga agggactatg gtgtcagaaa aaatgtgggg atgctgcccc 240
 aatcactgga agtcatttgg ctccagctgc tacctcattt ctaccaagga gaacttctgg 300
 agcaccagtg agcagaactg tgttcagatg ggggctcatc tggtggtgat caatactgaa 360
 gcggagcaga atttcatcac ccagcagctg aatgagtcac tttcttactt cctgggtctt 420
 tcggatccac aaggtaatgg caaatggcaa tggatcgatg atactccttt cagtcaaaat 480
 gtcaggttct ggcaccccca tgaaccaat cttccagaag agcgggtgtgt ttcaatagtt 540
 tactggaatc cttcgaaatg gggctggaat gatgttttct gtgatagtaa acacaattca 600
 atatgtgaaa tgaagaagat ttaccta 627

<210> 73
 <211> 586
 <212> PRT
 <213> Mus sp.

<400> 73

Met Glu Thr Val Ala Leu Gly Leu Asn Gly Leu Ala Arg Gly Gly Leu
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Asn Ser Glu Arg Gly Leu Asn Gly Leu Tyr Leu Tyr Ser Gly Leu Tyr
 20 25 30

Val Ala Leu Cys Tyr Ser Thr Arg Pro Thr His Arg Leu Glu Ala Arg
 35 40 45

Gly Leu Glu Thr Arg Pro Ser Glu Arg Ala Leu Ala Ala Leu Ala Val
 50 55 60

Ala Leu Ile Leu Glu Ser Glu Arg Met Glu Thr Leu Glu Leu Glu Leu
65 70 75 80

Glu Ser Glu Arg Thr His Arg Cys Tyr Ser Pro His Glu Ile Leu Glu
85 90 95

Ala Leu Ala Ser Glu Arg Cys Tyr Ser Val Ala Leu Val Ala Leu Thr
100 105 110

His Arg Thr Tyr Arg Gly Leu Asn Pro His Glu Ile Leu Glu Met Glu
115 120 125

Thr Ala Ser Pro Gly Leu Asn Pro Arg Ser Glu Arg Ala Arg Gly Ala
130 135 140

Arg Gly Leu Glu Thr Tyr Arg Gly Leu Leu Glu His Ile Ser Thr His
145 150 155 160

Arg Thr Tyr Arg His Ile Ser Ser Glu Arg Ser Glu Arg Leu Glu Thr
165 170 175

His Arg Cys Tyr Ser Pro His Glu Ser Glu Arg Gly Leu Gly Leu Tyr
180 185 190

Thr His Arg Met Glu Thr Val Ala Leu Ser Glu Arg Gly Leu Leu Tyr
195 200 205

Ser Met Glu Thr Thr Arg Pro Gly Leu Tyr Cys Tyr Ser Cys Tyr Ser
210 215 220

Pro Arg Ala Ser Asn His Ile Ser Thr Arg Pro Leu Tyr Ser Ser Glu
225 230 235 240

Arg Pro His Glu Gly Leu Tyr Ser Glu Arg Ser Glu Arg Cys Tyr Ser
245 250 255

Thr Tyr Arg Leu Glu Ile Leu Glu Ser Glu Arg Thr His Arg Leu Tyr
260 265 270

Ser Gly Leu Ala Ser Asn Pro His Glu Thr Arg Pro Ser Glu Arg Thr
275 280 285

His Arg Ser Glu Arg Gly Leu Gly Leu Asn Ala Ser Asn Cys Tyr Ser

290		295		300											
Val	Ala	Leu	Gly	Leu	Asn	Met	Glu	Thr	Gly	Leu	Tyr	Ala	Leu	Ala	His
305					310					315					320
Ile	Ser	Leu	Glu	Val	Ala	Leu	Val	Ala	Leu	Ile	Leu	Glu	Ala	Ser	Asn
				325					330					335	
Thr	His	Arg	Gly	Leu	Ala	Leu	Ala	Gly	Leu	Gly	Leu	Asn	Ala	Ser	Asn
			340					345					350		
Pro	His	Glu	Ile	Leu	Glu	Thr	His	Arg	Gly	Leu	Asn	Gly	Leu	Asn	Leu
		355					360					365			
Glu	Ala	Ser	Asn	Gly	Leu	Ser	Glu	Arg	Leu	Glu	Ser	Glu	Arg	Thr	Tyr
	370					375					380				
Arg	Pro	His	Glu	Leu	Glu	Gly	Leu	Tyr	Leu	Glu	Ser	Glu	Arg	Ala	Ser
385				390						395					400
Pro	Pro	Arg	Gly	Leu	Asn	Gly	Leu	Tyr	Ala	Ser	Asn	Gly	Leu	Tyr	Leu
			405						410					415	
Tyr	Ser	Thr	Arg	Pro	Gly	Leu	Asn	Thr	Arg	Pro	Ile	Leu	Glu	Ala	Ser
			420					425					430		
Pro	Ala	Ser	Pro	Thr	His	Arg	Pro	Arg	Pro	His	Glu	Ser	Glu	Arg	Gly
		435					440					445			
Leu	Asn	Ala	Ser	Asn	Val	Ala	Leu	Ala	Arg	Gly	Pro	His	Glu	Thr	Arg
	450					455					460				
Pro	His	Ile	Ser	Pro	Arg	His	Ile	Ser	Gly	Leu	Pro	Arg	Ala	Ser	Asn
465					470					475					480
Leu	Glu	Pro	Arg	Gly	Leu	Gly	Leu	Ala	Arg	Gly	Cys	Tyr	Ser	Val	Ala
				485					490						495
Leu	Ser	Glu	Arg	Ile	Leu	Glu	Val	Ala	Leu	Thr	Tyr	Arg	Trp	Ala	Ser
			500					505						510	
Asn	Pro	Arg	Ser	Glu	Arg	Leu	Tyr	Ser	Thr	Arg	Pro	Gly	Leu	Tyr	Thr
		515					520					525			

Arg Pro Ala Ser Asn Ala Ser Pro Val Ala Leu Phe Cys Tyr Ser Ala
530 535 540

Ser Pro Ser Glu Arg Leu Tyr Ser His Ile Ser Ala Ser Asn Ser Glu
545 550 555 560

Arg Ile Leu Glu Cys Tyr Ser Gly Leu Met Glu Thr Leu Tyr Ser Leu
565 570 575

Tyr Ser Ile Leu Glu Thr Tyr Arg Leu Glu
580 585

<210> 74
<211> 0
<212> DNA
<213> Mus sp.

<400> 74
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<210> 75
<211> 0
<212> DNA
<213> Mus sp.

<400> 75
000 3

<210> 76
<211> 0
<212> DNA
<213> Mus sp.

<400> 76
000 3

<210> 77
<211> 0
<212> DNA
<213> Mus sp.

<400> 77
000 3

<210> 78
<211> 0
<212> DNA
<213> Mus sp.

<400> 78
000 3

<210> 79
 <211> 0
 <212> DNA
 <213> Mus sp.

<400> 79
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3

<210> 80
 <211> 0
 <212> DNA
 <213> Mus sp.

<400> 80
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3

<210> 81
 <211> 1202
 <212> DNA
 <213> Homo sapiens

<400> 81
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 acaaggagct ggctttgggc taggctgctc cttgcctatg attggggaag gttaaaccac 180
 tacagggctt atgtatgtgg aaactgttgg aacactgatt aaatgggatg gacttcactt 240
 aacactcttg gatttccaat attatgtttg agtaaaagaa ctgctatcca caaacaccat 300
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 aattaaaagc actgtgagat accactacac actgatgaga atggctaaaa tcaaaaaaga 900
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ggcatgcgcc tgtaattcca gctactcagg aggctgaggc aggagaatcg cttgaaccca 1080
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 gc 1202

<210> 82
 <211> 255
 <212> DNA
 <213> Homo sapiens

<400> 82
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 gcttgtgatg acattatttc taatagggaa tgggaaagga tgtagcttc tcaggtttta 180
 aagtgtcctg gaggagaaga gaaaggacga catgagaagg agacaatgaa gaagatgggt 240
 gagggggaga tagtg 255

<210> 83
 <211> 85
 <212> PRT
 <213> Homo sapiens

<400> 83

Met Gln Ser His Leu Phe Ile Thr Leu Gly Ser Val Phe Leu Leu Leu
 1 5 10 15

Trp Ala Phe Ile Trp Gly Gly His Val Ser Pro Thr Trp Asn Ser Glu
 20 25 30

Pro Gly Gln Asp Ser Asn Leu Trp Ala Cys Asp Asp Ile Ile Ser Asn
 35 40 45

Arg Glu Trp Glu Arg Met Leu Ala Ser Gln Val Leu Lys Cys Pro Gly
 50 55 60

Gly Glu Glu Lys Gly Arg His Glu Lys Glu Thr Met Lys Lys Met Gly
 65 70 75 80

Glu Gly Glu Ile Val
 85

<210> 84

<211> 23
 <212> PRT
 <213> Homo sapiens

<400> 84

Met Gln Ser His Leu Phe Ile Thr Leu Gly Ser Val Phe Leu Leu Leu
 1 5 10 15

Trp Ala Phe Ile Trp Gly Gly
 20

<210> 85
 <211> 62
 <212> PRT
 <213> Homo sapiens

<400> 85

His Val Ser Pro Thr Trp Asn Ser Glu Pro Gly Gln Asp Ser Asn Leu
 1 5 10 15

Trp Ala Cys Asp Asp Ile Ile Ser Asn Arg Glu Trp Glu Arg Met Leu
 20 25 30

Ala Ser Gln Val Leu Lys Cys Pro Gly Gly Glu Glu Lys Gly Arg His
 35 40 45

Glu Lys Glu Thr Met Lys Lys Met Gly Glu Gly Glu Ile Val
 50 55 60